

REMARKS

Claims 1-40 remain in this application. Claims 1, 3, 5, 12, 14, 15, 22, 23, 28, 30, 32 and 39 are currently being amended.

**Claim Rejections – 35 USC § 112**

Claims 1-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

As described at page 7, lines 5-9, the heterodyne signal at each wavelength, results from the interference of the back-scattered probe beam and the reference beam. The claimed embodiments are clearly supported by this description. Both wavelengths illuminate both the sample and the reference target and undergo interference when the backscattered paths overlap.

**Claim Rejections – 35 USC § 102**

Claims 1, 2-6, 8-14, 17-22-25, 27, 28, 31-33 and 35-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Nathel et al (6,015,969).

Independent claims 1, 14 and 28 have been amended to distinguish over the Nathel reference. Claim 1 recites a method of using a heterodyne measurement to measure a size of cell nucleus within tissue. The Nathel reference fails to disclose or suggest such a method.

Claim 14 has been amended to recite a system wherein the wavelengths are harmonically related and that the heterodyne signals are processed to determine a size of cell nuclei within tissue.

Claim 28 has been amended to recite a method in which the beam sizes of the two wavelengths are controlled to illuminate the same region of tissue. This method is described at page 6, lines 13-21.

**Claim Rejections – 35 USC § 103**

Claims 3, 16, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita as applied to claims 2, 15, and 29 above. Claims 7 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over de Groot et al (5,838,485).

As noted above, the claims have been amended. The Fujita and de Groot references fail to disclose or suggest the claims as amended.

**CONCLUSION**

In view of the amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone call would expedite the prosecution of this case, the Examiner is invited to call the undersigned at (508) 416-2474.

Respectfully submitted,  
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